Patent Claims:

1. Method for the evaluating of an installation location (p2) of an acceleration sensor assembly (2) in a vehicle (3) with respect to the transmission characteristics to this installation location (p2) of acceleration impulses (s1a, s1b) acting on the vehicle (3), with a following serially-connected evaluating circuit (s7), especially for the triggering (s8) of occupant protection devices,

   a) in which a prescribed acceleration impulse (s1a, s1b, ...) is impressed at at least one prescribed position (p1a, p1b, ...) on the vehicle, the impulse response is measured at the installation location,

   b) the frequency spectrum ($a(f)_{actual}$) of the impulse response is determined

   c) and the installation location (p2) is evaluated through comparison of this frequency spectrum with a prescribed nominal spectrum ($a(f)_{nominal}$).

2. Method according to claim 1, in which method according to one of the preceding claims, in which a plurality of various different acceleration impulses (s1a) to be expected in the operation of the vehicle are impressed at various different impact points of the vehicle.

3. Method according to claim 2, in which a group of safety-harmless acceleration impulses, for which no triggering of occupant protection devices is necessary, are

impressed, wherein the installation location is evaluated regarding to what extent the frequency spectra of the impulse responses to these safety-harmless impulse signals do not exceed the prescribed nominal spectrum ($a(f)_{nominal}$).

4. Method according to claim 3, wherein additionally a group of safety-critical acceleration impulses, for which a triggering of occupant protection devices is necessary, are impressed, wherein the installation location is evaluated regarding to what extent the frequency spectra of the impulse responses to these safety-critical impulse signals exceed the prescribed nominal spectrum the prescribed nominal spectrum ($a(f)_{nominal}$).

5. Method according to one of the preceding claims, wherein the nominal spectrum ($a(f)_{nominal}$) is determined from:

a) the frequency response characteristic of the sensor of the acceleration sensor assembly that is to be installed at the installation location and

b) the frequency response characteristic of the mechanical components of the sensor assembly and

c) a characteristic of the following serially-connected evaluating circuit.

6. Method according to claim 2, in which additionally the frequency response characteristic of the sensor used for the measurement of the impulse response directly at the installation location is taken into consideration.

7. Method according to one of the preceding claims 2 to 6, wherein the impulse responses to the various different acceleration impulses that are to be expected in the operation of the vehicle, which impulse responses are measurable at the installation location, are weighted with a weighting function (G) and provided to the following serially-connected evaluating circuit, wherein the evaluating circuit generates a corresponding output signal from the impulse response corresponding to a prescribed evaluating algorithm, and in the evaluation of the installation location, additionally, the comparison of the output signals with nominal output signals respectively prescribed for the impressed acceleration impulse is carried out.

8. Method according to claim 7, wherein the weighting function (G) is derived from the reciprocal of the nominal spectrum $\left(a(f)_{nominal}\right)$.

9. Method according to claim 7 or 8, wherein the evaluating algorithm of the evaluating circuit includes an integration of the acceleration impulse over a time window, and in the evaluation of the installation location, a comparison of the impulse response, which is weighted and integrated over this time window, with a nominal integration value for the respective impressed acceleration impulse is carried out.

10. Method according to claim 1, in which a broadband norm signal (s1b), especially a white noise or a pseudo-random sequence, is impressed on the vehicle, the impulse response measurable at the installation location (p2) is measured, therefrom the transmission characteristic is determined via a Fast-Fourier-Transformation and compared with a prescribed nominal characteristic ($a(f)_{nominal}$).

11. Method according to claim 10, wherein the norm signal is impressed at various different impact points on the vehicle, and the transmission characteristics of the various different impact points are compared with the nominal characteristic and additionally with one another.

12. Method according to claim 10, wherein the norm signal (s1b) is impressed at the installation location (p2) of the acceleration sensor assembly, and the components reflected in the vehicle are evaluated while screening out the direct input coupling.

13. Method according to one of the claims 10 to 12, wherein one or more maximum length sequences (MLS-sequences) are used as the norm signal (s1b).

14. Method for the evaluating of an installation location of an acceleration sensor assembly in a vehicle with respect to the transmission characteristics to this installation location of acceleration impulses acting on the vehicle,

with a following serially-connected evaluating circuit, especially for the triggering of occupant protection devices,

a) wherein a vehicle simulation program that can be carried out on a data processing system is provided,

b) to which acceleration impulses are prescribed at prescribed impact points on the vehicle,

c) by means of the vehicle simulation program, the impulse responses at the installation location are simulated, and the installation location is evaluated through comparison of the frequency spectrum of the simulated impulse responses with a prescribed nominal spectrum installation location.

15. Method according to claim 14, wherein the vehicle simulation program is based on the transmission characteristics determined according to the method according to claim 10.